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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/600,842	TSUCHIHASHI, HIDEHISA	
	Examiner	Art Unit	
	NEGUSSIE WORKU	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 December 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16 and 19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16 and 19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 June 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 11/21/2008 have been fully considered but they are not persuasive.

Regarding claims 1, 9 and 15, the Applicant alleged that the combination of Yajima '264' in view of Uchida '365' fails to show or suggest, "a calculation device that calculates an estimated length of required time to complete image signal output after a scan instruction with regard to the scan original is issued, and a calculation result output device that outputs the estimated length of required time as calculation results obtained at the calculation device such that the estimated length of required time is displayed on an external monitor" as currently amended in claims 1, 9 and 15 respectively.

In response, the Examiner respectfully disagrees because the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

In this case, the Examiner asserts that the combination of Yajima '264' and Uchida '365' when considered as a whole clearly teaches that "a calculation device

shown in 4 of fig 1, that calculates an estimated length of required time to complete image signal output after a scan instruction with regard to the scan original is issued, and the calculation result output device by 1 of fig 1 that outputs calculation results obtained at the calculation device 4 of fig 1, as discussed in paragraph 0026 by Uchida (365) as currently amended in claims 1 and 19, are well-known in the art at the time of the invention was made. In particular, Uchida '365' clearly suggested the advantage of combining the calculation device 4 of fig 1.

In view of the above, having the system of Yajima '264' and then given the well-established teaching of Uchida '365', the Examiner asserts that it would have been obvious to one having ordinary skill in the art at the time of the invention was made to mount the calculating device of Uchida '365' for the purpose of controlling the timing of the outputting device for avoiding an over flow of the memory that store the data in the outputted device.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yajima et al. (USP 6,240,264), in view Uchida (JP 08258365A).

With respect to claim 1, Yajima et al. teaches an image scanning system (digital copy machine as shown fig 2 and 4) comprising: an image-capturing device (CCD image sensor 116 of fig 2) that captures an image of a scan original and outputs image signals (image reading section 110 or CCD scanner 116, read image and output image signal, col.col.4, 55-60); an image processing circuit (personal computer PC1 and PC2 of fig 4) that executes image processing on the image signals (fig 4, illustrates data processing apparatuses that are connected to image copy machine 1 of fig 4, col.9, lines25-20); an image signal output device (control section 13 1) that outputs the image signals having undergone the image processing (control section 13 of fig 1, determine the output order of image data, as discussed in col.7, lines 45-50).

Yajima (264) does not teaches a calculation device that calculates an estimated length of required time to complete image signal output after a scan instruction with regard to the scan original is issued; and a calculation result output device that outputs calculation results obtained at the calculation device; a calculation result output device that outputs the estimated length of required time as calculation results obtained at the calculation device such that the estimated length of required time is displayed on an external monitor.

However, Uchida (365) teaches a calculation device (4 of fig 1) that calculates an estimated length of required time to complete image signal output after a scan

instruction with regard to the scan original is issued, see (abstract); a calculation result output device that outputs the estimated length of required time as calculation results obtained at the calculation device such that the estimated length of required time is displayed on an external monitor (1 of fig 1, as discussed in paragraph 0026).

Therefore, It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified imaging device of Yajima (264) by the teaching of Uchida (365) for the purpose of controlling the timing of the outputting device for avoiding an over flow of the memory that store the data in the outputted memory device.

With respect to claim 2, Yajima (264) does not teach, wherein the calculation device also calculates an estimated end time point by adding the estimated length of required time to a current time point; and the calculation result output device outputs at least one of the estimated length of required time and the estimated end time point.

Uchida (365) teaches wherein the calculation device (4 of fig 1) also calculates an estimated end time point by adding the estimated length of required time to a current time point, see (abstract); and the calculation result output device outputs at least one of the estimated length of required time and the estimated end time point, see (1 of fig 1, as discussed in paragraph 0026).

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified the imaging apparatus of to include: wherein the calculation device also calculates an estimated end time point by adding

the estimated length of required time to a current time point; and the calculation result output device outputs at least one of the estimated length of required time and the estimated end time point.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified imaging device of Yajima (264) by the teaching of Uchida (365) for the purpose of controlling the timing of the outputting device for avoiding an over flow of the memory that store the data in the outputted memory device.

With respect to claim 3, Yajima (264) an image scanning system (fig 1), wherein: the image-capturing device (copy machine of fig 2) executes a preliminary image-capturing operation and a main image-capturing operation on the scan original (col.11, line 35-40); the preliminary image-capturing operation, the main image-capturing operation, the image processing and the image signal output, as discussed in (col.7, lines 45-50).

Yajima (264) does not teaches the calculation device calculates a total of lengths of required time to execute an estimated length of required time to complete image signal output after a scan instruction with regard to the scan original is issued;

However, Uchida (365) teaches a calculation device (4 of fig 1) that calculates an estimated length of required time to complete image signal output after a scan instruction with regard to the scan original is issued (1 of fig 1, as discussed in the abstract (1 of fig 1, as discussed in paragraph 0026).

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified the imaging apparatus of to include: teaches the calculation device calculates a total of lengths of required time to execute an estimated length of required time to complete image signal output after a scan instruction with regard to the scan original is issued.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified imaging device of Yajima (264) by the teaching of Uchida (365) for the purpose of controlling the timing of the outputting device for avoiding an over flow of the memory that store the data in the outputted memory device.

With respect to claim 4, Yajima (264) an image scanning system (fig 1), further comprising: a storage device (processing system PC 1 of fig 4) in which an actual length of required time is stored in memory (within the storage or memory of image processing device PC1 of fig 4) in correspondence to each of the steps, the actual length of time being a length of time having been required to actually execute a step, (the CPU of personal computer PC1 of fig 4, controls executing time).

Yajima (264) does not teaches the calculation device calculates a length of required time to execute each of the steps by averaging n values each representing the actual length of required time for executing a step, which have been stored into the storage device most recently.

However, Uchida (365) teaches the calculation device calculates a length of required time to execute each of the steps by averaging n values each representing the actual length of required time for executing a step, which has been stored into the storage device most recently (memory 2 of fig 1, as discussed in, as discussed in paragraph 0026).

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified the imaging apparatus of to include: the calculation device calculates a length of required time to execute each of the steps by averaging n values each representing the actual length of required time for executing a step, which have been stored into the storage device most recently.

the calculation device calculates a length of required time to execute each of the steps by averaging n values each representing the actual length of required time for executing a step, which has been stored into the storage device most recently.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified imaging device of Yajima (264) by the teaching of Uchida (365) for the purpose of controlling the timing of the outputting device for avoiding an over flow of the memory that store the data in the outputted memory device.

With respect to claim 5, Yajima (264) an image scanning system (fig 1), wherein: the image-capturing device (copy machine of fig 2) executes a preliminary image-capturing operation and a main image-capturing operation on the scan original (col.11,

line 35-40); the preliminary image-capturing operation, the main image-capturing operation, the image processing and the image signal output, as discussed in (col.7, lines 45-50).

Yajima (264) does not teaches the calculation device calculates a length of required time to execute each of the steps as a value most frequently indicated among values each representing the actual length of required time for executing a step, which have been stored in the storage device.

However, Uchida (365) teaches a calculation device (4 of fig 1) calculates a length of required time to execute each of the steps as a value most frequently indicated among values each representing the actual length of required time for executing a step, which have been stored in the storage device, ((memory 2 of fig 1, as discussed in paragraph 0026).

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified the imaging apparatus of to include: the calculation device calculates a total of lengths of required time to execute an estimated length of required time to complete image signal output after a scan instruction with regard to the scan original is issued.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified imaging device of Yajima (264) by the teaching of Uchida (365) for the purpose of controlling the timing of the outputting

device for avoiding an over flow of the memory that store the data in the outputted memory device.

With respect to claim 6, Yajima (264) teaches an image scanning system (fig 1), further comprising: a control device (control section fig 1) that controls the storage device (storage device with in the computer Pc1 of fig 4) so as not to store the actual length of required time corresponding to a step among the steps under at least one of following conditions if the actual length of required time for the step exceeds a predetermined length of time; if the step is canceled while the step is in progress; and if an error occurs during the step (a CPU, which is included in the PC1, having a control function over the condition to store data in the system, including timing).

With respect to claim 7, Yajima (264) teaches an image scanning system (fig 1), further comprising: a control device (control section fig 1) that controls the storage device (storage device with in the computer Pc1 of fig 4) so as not to store the actual length of required time corresponding to a step among the steps under at least one of following conditions if the actual length of required time for the step exceeds a predetermined length of time; if the step is canceled while the step is in progress; and if an error occurs during the step (a CPU, which is included in the PC1, having a control function over the condition to store data in the system, including timing).

With respect to claim 8, Yajima (264) does not teach the calculation result output device also outputs a length of required time to execute each of the steps.

However, Uchida (365) teaches a calculation device (4 of fig 1) the calculation result output device also outputs a length of required time to execute each of the steps, (1 of fig 1, as discussed in paragraph 0026).

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified the imaging apparatus of to include: the calculation result output device also outputs a length of required time to execute each of the steps. .

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified imaging device of Yajima (264) by the teaching of Uchida (365) for the purpose of controlling the timing of the outputting device for avoiding an over flow of the memory that store the data in the outputted memory device.

With respect to claim 9, Yajima (264) does not teach the calculation result output device also outputs a length of required time to execute each of the steps.

However, Uchida (365) teaches a calculation device (4 of fig 1) the calculation result output device also outputs a length of required time to execute each of the steps, (1 of fig 1, as discussed in the abstract).

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified the imaging apparatus of to include: the calculation result output device also outputs a length of required time to execute each of the steps. .

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified imaging device of Yajima (264) by the teaching of Uchida (365) for the purpose of controlling the timing of the outputting device for avoiding an over flow of the memory that store the data in the outputted memory device.

With respect to claim 10, Yajima (264) does not teach the calculation result output device also outputs a length of required time to execute each of the steps.

However, Uchida (365) teaches a calculation device (4 of fig 1) the calculation result output device also outputs a length of required time to execute each of the steps, (1 of fig 1, as discussed in paragraph 0026).).

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified the imaging apparatus of to include: the calculation result output device also outputs a length of required time to execute each of the steps. .

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified imaging device of Yajima (264) by the teaching of Uchida (365) for the purpose of controlling the timing of the outputting device for avoiding an over flow of the memory that store the data in the outputted memory device.

With respect to claim 11, Yajima (264) do not teach the calculation device calculates the estimated length of required time to complete output of all the image

signals corresponding to designated frames among the plurality of frames after a scan instruction is issued with regard to the designated frames; and the calculation result output device outputs calculation results obtained by the calculation device.

However, Uchida (365) teaches a calculation device (4 of fig 1) calculates the estimated length of required time to complete output of all the image signals corresponding to designated frames among the plurality of frames after a scan instruction is issued with regard to the designated frames; and the calculation result output device outputs calculation results obtained by the calculation device, (1 of fig 1, as discussed in paragraph 0026).

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified the imaging apparatus of to include: the calculation device calculates the estimated length of required time to complete output of all the image signals corresponding to designated frames among the plurality of frames after a scan instruction is issued with regard to the designated frames; and the calculation result output device outputs calculation results obtained by the calculation device.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified imaging device of Yajima (264) by the teaching of Uchida (365) for the purpose of controlling the timing of the outputting device for avoiding an over flow of the memory that store the data in the outputted memory device.

With respect to claim 12, Yajima (264) teaches an image scanning system (fig 1 and 2), wherein: the image-capturing device (image copy device, (fig 2) which includes image sensor 16 of fig 2) executes a preliminary image-capturing operation and a main image-capturing operation for each of the designated frames (col.4, lines 35-40);

Yajima (264) do no teach the calculation device calculates lengths of time required to execute steps of, at least, the preliminary image-capturing operation, the main image-capturing operation, the image processing and the image signal output for each of the designated frames and also calculates a length of required time to feed the scan original.

However, Uchida (365) teaches a calculation device (4 of fig 1) calculates calculates lengths of time required to execute steps of, at least, the preliminary image-capturing operation, the main image-capturing operation, the image processing and the image signal output for each of the designated frames and also calculates a length of required time to feed the scan original, (1 of fig 1, as discussed in paragraph 0026).).

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified the imaging apparatus of to include: calculates lengths of time required to execute steps of, at least, the preliminary image-capturing operation, the main image-capturing operation, the image processing and the image signal output for each of the designated frames and also calculates a length of required time to feed the scan original.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified imaging device of Yajima (264) by the teaching of Uchida (365) for the purpose of controlling the timing of the outputting device for avoiding an over flow of the memory that store the data in the outputted memory device.

With respect to claim 13,Yajima (264) teaches an image scanning system (fig 2), further comprising: a storage device (a memory with in the PC1, which is a processor where image processing is performed) in which an actual length of required time is stored in memory in correspondence to each of the steps and a feed time that has been required to actually feed the scan original is also stored in memory, the actual length of required time being a length of time having been required to actually execute a step, (the step of storing and executing the image in the system is controlled by control section 13 of fig 1, col.11, lines 60-65).

Yajima does not teach or disclose the calculation device calculates a length of required time to execute each of the steps by averaging n values each representing the actual lengths of required time for executing a step, which have been stored into the storage device most recently and calculates the length of required time to feed the scan original by averaging n values each representing the feed time, which have been stored into the storage device most recently.

However, Uchida (365) teaches a calculation device (4 of fig 1) the calculation device calculates a length of required time to execute each of the steps by averaging n values each representing the actual lengths of required time for executing a step, which

have been stored into the storage device most recently and calculates the length of required time to feed the scan original by averaging n values each representing the feed time, which have been stored into the storage device most recently, (2 of fig 1, as discussed in paragraph 0026).

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified the imaging apparatus of to include: the calculation device calculates a length of required time to execute each of the steps by averaging n values each representing the actual lengths of required time for executing a step, which have been stored into the storage device most recently and calculates the length of required time to feed the scan original by averaging n values each representing the feed time, which have been stored into the storage device most recently.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified imaging device of Yajima (264) by the teaching of Uchida (365) for the purpose of controlling the timing of the outputting device for avoiding an over flow of the memory that store the data in the outputted memory device.

With respect to claim 14,Yajima (264) teaches an image scanning system (fig 2), further comprising: a storage device (a memory with in the PC1, which is a processor where image processing is performed) in which an actual length of required time is stored in memory in correspondence to each of the steps and a feed time that has been required to actually feed the scan original is also stored in memory, the actual length of

required time being a length of time having been required to actually execute a step, (the step of storing and executing the image in the system is controlled by control section 13 of fig 1, col.11, lines 60-65).

Yajima does not teach or disclose the calculation device calculates a length of required time to execute each of the steps as a value most frequently indicated among values each representing the actual length of required time for executing a step, that have been stored in the storage device and calculates the length of required time to feed the scan original as a value most frequently indicated among values each representing the feed time, that have been stored in the storage device.

However, Uchida (365) teaches a calculation device (4 of fig 1), calculates a length of required time to execute each of the steps as a value most frequently indicated among values each representing the actual length of required time for executing a step, that have been stored in the storage device and calculates the length of required time to feed the scan original as a value most frequently indicated among values each representing the feed time, that have been stored in the storage device, time, which have been stored into the storage device most recently, (2 of fig 1, as discussed in paragraph 0026).

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified the imaging apparatus of to include: the calculation device calculates a length of required time to execute each of the steps as a value most frequently indicated among values each representing the actual length of required time for executing a step, that have been stored in the storage device and

calculates the length of required time to feed the scan original as a value most frequently indicated among values each representing the feed time, that have been stored in the storage device, time, which have been stored into the storage device most recently.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified imaging device of Yajima (264) by the teaching of Uchida (365) for the purpose of controlling the timing of the outputting device for avoiding an over flow of the memory that store the data in the outputted memory device.

With respect to claim 15, Yajima (264) teaches a computer-readable computer program product having an image scan processing control program, the control program (computer PC1 of fig 4, for executing program stored in the computer storage for running the image processing apparatus of fig 1) comprising:

a start instruction for starting a scan of a scan original (control section input instruction for starting the scanner of fig 2); an image signal processing instruction for executing image processing on image signals obtained by capturing an image of the scan original (image processing instruction is inputting by computer PC1 of fig 4);

an image signal output instruction for outputting the image signals having undergone the image processing (image processing instruction is inputting by computer PC1 of fig 4, control both inputting and outputting data from image processing system of fig 4);

Yajima (264) does not teach or disclose a calculate instruction for calculating an estimated length of required time to complete an output of the image signals after the start instruction for starting the scan is issued; a calculation result output instruction for outputting calculation results obtained in response to the calculate instruction.

However, Uchida (365) teaches a calculate instruction (4 of fig 1) for calculating an estimated length of required time to complete an output of the image signals after the start instruction for starting the scan is issued; a calculation result output instruction for outputting calculation results obtained in response to the calculate instruction, (1 of fig 1, as discussed in paragraph 0026).

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified the imaging apparatus of to include: a calculate instruction for calculating an estimated length of required time to complete an output of the image signals after the start instruction for starting the scan is issued; a calculation result output instruction for outputting calculation results obtained in response to the calculate instruction, (1 of fig 1, as discussed in the abstract).

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified imaging device of Yajima (264) by the teaching of Uchida (365) for the purpose of controlling the timing of the outputting device for avoiding an over flow of the memory that store the data in the outputted memory device.

With respect to claim 16, although Yajima (264) shows a computer-readable computer program product, (computer PC1 of fig 4, which execute a program stored in

a storage medium), However, Yajima fail to teach wherein control is implemented in conformance to the calculation instruction so as to further calculate an estimated end time point obtained by adding the estimated length of required time to a current time point; and control is implemented in conformance to the calculation result output instruction so as to output at least one of the estimated length of required time and the estimated end time point.

Uchida (365) teaches control is implemented in conformance to the calculation instruction so as to further calculate an estimated end time point obtained by adding the estimated length of required time to a current time point; and control is implemented in conformance to the calculation result output instruction so as to output at least one of the estimated length of required time and the estimated end time point, (1 of fig 1, as discussed in paragraph 0026).

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified the imaging apparatus of to include: control is implemented in conformance to the calculation instruction so as to further calculate an estimated end time point obtained by adding the estimated length of required time to a current time point; and control is implemented in conformance to the calculation result output instruction so as to output at least one of the estimated length of required time and the estimated end time point.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified imaging device of Yajima (264) by the teaching of Uchida (365) for the purpose of controlling the timing of the outputting

device for avoiding an over flow of the memory that store the data in the outputted memory device.

With respect to claim 17, Yajima (264) teaches a computer-readable computer program product wherein: the computer-readable computer program product is a recording medium on which the image scan processing control program is recorded, (computer PC1 of fig 4, for executing program stored in the computer storage for running the image processing apparatus of fig 1).

With respect to claim 18, Yajima (264) teaches, wherein the computer-readable computer program product is a carrier wave in which the image scan processing control program is embodied as a data signal (computer PC1 of fig 4, for executing program stored in the computer storage for running the image processing apparatus of fig 1).

With respect to claim 19, Yajima (264) teaches an image scanning method, (fig 2) comprising: capturing an image of a scan original (scanner 116 of fig 2); executing image processing on image signals obtained by capturing the image of the scan original (computer PC1 of fig 2, for executing image scanned by copy machine fig 2); outputting the image signals having undergone the image processing (image scanned by copy machine of fig 2, is outputted by outputting means 7 of fig 5, via interface 15 of fig 4);

Yajima (264) does not teaches calculating an estimated length of required time to complete an output of the image signals after a scan of the scan original is instructed; and outputting calculation results with regard to the estimated length of required time.

However, Uchida (365) teaches a calculation device (4 of fig 1) calculating an estimated length of required time to complete an output of the image signals after a scan of the scan original is instructed; and outputting calculation results with regard to the estimated length of required time such that the estimated length of required time is displayed on an external monitor, see (abstract); and a calculation result output device (1 of fig 1) that outputs calculation results obtained at the calculation device (1 of fig 1, as discussed in paragraph 0026).

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified the imaging apparatus of to include: calculating an estimated length of required time to complete an output of the image signals after a scan of the scan original is instructed; and outputting calculation results with regard to the estimated length of required time.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified imaging device of Yajima (264) by the teaching of Uchida (365) for the purpose of controlling the timing of the outputting device for avoiding an over flow of the memory that store the data in the outputted memory device.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NEGUSSIE WORKU whose telephone number is (571)272-7472. The examiner can normally be reached on 9A-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on 571-272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Negussie Worku/

Primary Examiner, Art Unit 2625

/Edward L. Coles/

Supervisory Patent Examiner, Art Unit 2625